

Underway measurements metadata form

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- Dataset Info:
 - Dataset ID: FRA near-Japan pCO₂ cruises
 - Submission Dates:
 - Initial Submission: 2011/12/26
 - Revised Submission: 2015/03/19
- Cruise Info:
 - Experiment:
 - Experiment Name: SY1011
 - Cruise:
 - Cruise ID: SY101112
 - Section:
 - Geographical Coverage:
 - Geographical Region: Japan-coast
 - Bounds:
 - Westernmost Longitude: +131.24
Degrees, Minutes, Seconds: E
 - Easternmost Longitude: +139.69
Degrees, Minutes, Seconds: E
 - Northernmost Latitude: +35.03
Degrees, Minutes, Seconds: N
 - Southernmost Latitude: +29.31
Degrees, Minutes, Seconds: N
 - Temporal Coverage:
 - Start Date: 2010/11/12
 - End Date: 2010/11/23
 - Ports of Call:
 - depart: Yokohama port arrive: Yokohama port
 - Vessel:
 - Vessel Name: Soyo-Maru
 - Vessel ID:
 - Country: Japan
 - Vessel Owner: Fisheries Research Agency
- Variables Info:
 - Variable:
 - Variable Name: airP
 - Description of Variable: sAtmospheric pressure at sea-surface (hPa)
 - Method Description:
 - Equilibrator Design:
 - Equilibrator type: membrane equilibrator

- Equilibrator volume:0.4
 - Water_Flow_Rate: 2.5
 - Headspace_Gas_Flow_Rate:0.1
 - Vented: Yes
- Measurement Method: automated version of Saito et al. [1995]
- Manufacturer of Calibration Gas: Nissan-Tanaka Co. Ltd.
- CO₂ Sensors:
 - Manufacturer: Li-CO
 - Model: LI-6262
 - Environmental Control:
 - Resolution: 0.1 μmol/mol
 - Uncertainty: 0.1 μmol/mol
 - Calibration:

NDIR was calibrated at Li-Co laboratory Aug. 2004. Mol fraction of CO₂ standard gas was calibrated on Oct. 6 2010 at factory with WMO scale.
- Other sensors:
 - Manufacturer: JFE Arec Co. LTD (SST) , *Sea-Bird (SSS)*
 - Model: ACT-RS , *SBE45*
 - Resolution: 0.02°C , *0.003 (SSS)*
 - Calibration:

ACT-RS was calibrated on Sept. 2010 at factory with standard thermometer which was calibrated at Japan Meteorological Agency (JMA). Pressure sensor for airP was last calibrated by JMA in Oct. 2005. *SBE45 was calibrated at factory on Feb 2010.*
- Method References:

Saito et al., A compact seawater pCO₂ measurement system with membrane equilibrator and nondispersive infrared gas analyzer, Deep-Sea Res., 42, 2025-2033, 1995.
- Additional Information:
- Data Set References:
- Citation:
- Data Set Link:
 - URL:
 - Label:
 - Link Note: